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| TANG, KARIN C  |             |                      |                     |                  |
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/669,750

**Applicant(s)**

CHESTON ET AL.

**Examiner**

KAREN C. TANG

**Art Unit**

2151

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 June 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

- This action is responsive to the amendment and remarks file on 06/06/08.
- Claims 1-30 are presented for further examination.

### **DETAILED ACTION**

#### ***Response to Arguments***

Applicant's arguments with respect to claims 1-30 have been considered but are moot in view of the new ground(s) of rejection.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-14, 16-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koyanagi et al hereinafter Koyanagi (US 7,187,658) in view of Reynolds al hereinafter Reynolds (US 2007/0117564) in further view of Liang et al hereinafter Liang (US 2004/0019665).

1. Referring to Claims 1, 7 and 17, Koyanagi disclosed a network selection apparatus for inclusion within an electronic computing device to determine a best network service for the electronic computing device, the apparatus comprising:  
a network query module (refer to Col 16, lines 27-67 and Col 17, Lines 1-45, perform functionality of query to query network information) configured to query a first network for a

plurality of first network characteristics and to query a second network for a plurality of second network characteristics (received dynamic information, Col 6, Lines 26, and Col 6, lines 1-5); a service level module configured to determine a first network service level based on the plurality of first network characteristics and to determine a second network service level based on the plurality of second network characteristics (class selection unit, Col 7, Lines 10-15); a best network module (path selection unit 13) configured to determine a best network from the first and second networks based on the first and second service levels (refer to Col 6, Lines 45-50); and a network connection module configured to dynamically connect the electronic computing device to the best network (refer to Col 6, Lines 50-55); wherein the plurality of first network characteristics comprises at least two characteristics selected from the group consisting of a network type indicator, a cost indicator, a security indicator, a bandwidth indicator, and a time remaining indicator (refer to service class, data transmission speed, transmission fee, Col 7, Lines 40-47, different DSP, Identification, Fig 12B, time, Fig 17b and Fig 19B).

Although Koyanagi disclosed the invention substantially as claimed, Koyanagi is silent regarding “the network characteristics consisting: a signal strength indicator and a mobility indicator, the mobility indicator comprising coverage area”

Reynolds, in analogous art, disclosing “the network characteristics consisting: a signal strength indicator (refer to 0028) and a mobility indicator, the mobility indicator comprising coverage area (refer to 0022)”

Hence, providing features disclosing by Reynolds, would be desirable for a user of Koyanagi's to implement in order to avoid drop calls and improve general quality of service during the call by

determine the best available network while roaming and to perform the desirable handover to the best decided network.

Therefore, at the time of the invention, it would have been obvious to one of ordinary skill in the art to modify the system of Koyanagi by including the features such as signal strength indicator and mobility indicator as presented by Reynolds.

Although Koyanagi and Reynolds disclosed the invention substantially as claimed, Koyanagi and Reynolds are silent regarding “a network connection module configured to dynamically connect the electronic computing device to the best network if authorization for the best network is automatic, and request and receive a user authorization from a user, provide the user authorization, and dynamically connect the electronic computing device to the best network with the user authorization if the authorization for the best network is not automatic.”

Liang, in an analogous art, disclosing “a network connection module configured to dynamically connect the electronic computing device to the best network if authorization for the best network is automatic, and request and receive a user authorization from a user, provide the user authorization, and dynamically connect the electronic computing device to the best network with the user authorization if the authorization for the best network is not automatic (refer to 0021 and Fig 3)”

Hence, providing features disclosing by Liang, would be desirable for a user of Koyanagi and Reynold's to implement in order to convenience the mobile user by expertise the process of handover in between the existing network to the decided network (while compliance with the network policies) while roaming.

Therefore, at the time of the invention, it would have been obvious to one of ordinary skill in the art to modify the systems of Koyanagi and Reynolds by including the features such as automatic authorize or manually authorize to connect to the network as presented by Reynolds.

2. Referring to Claims 11, Koyanagi disclosed the apparatus of claim 8, wherein the profile comprises a minimum service level (routing table and information table stores the path and service class information/maintained profile, by constantly obtain information, Col 8, Lines 55-67 and Col 11, Lines 15-30, service classes rated EF-PHB, AF-PHB and best effort, and refer to Col 1, Lines 40-50, does contain a minimum service level, in Fig 8C).

3. Referring to Claims 16, Koyanagi disclosed a system for determining a best network service for an electronic computing device, the system comprising: a first network (refer to Col 6, Lines 1-5); a second network (refer to Col 6, Lines 1-5); an electronic computing device having a first connection adapter (output port 1, Fig 7) and a second connection adapter (output port 2, Fig 7), the first connection adapter configured to connect to the first network (ISP 1) and the second network adapter configured to connect to the second network (ISP2, and output port1 connect to ISP 1, output port 2 connect to ISP 2, refer to Fig 7); a network query module resident (table management unit 27, is within the data transmission device) within the electronic computing device, the network query module configured to query the first network for a plurality of first network characteristics and to query the second network for a plurality of second network characteristics (table management unit, 27, obtain, is corresponds to "query", Col 8, Lines 58-62, and received dynamic information, Col 6, Lines 26, and Col 6, lines 1-5); a service level module

(class selection unit, Col 7, Lines 10-15) resident within the electronic computing device, the service level module configured to determine a first network service level based on an influenced algorithm using the plurality of first network characteristics and to determine a second network service level based on the influenced algorithm using the plurality of second network characteristics (refer to Col 7, Lines 10-20, 50-60 and Col 8, Lines 10-25 ); a best network module (path selection unit 13) resident within the electronic computing device, the best network module configured to determine a best network from the first and second networks based on the first and second service levels (refer to Col 6, Lines 45-50); and a network connection module resident within the electronic computing device, the network connection module configured to dynamically connect the electronic computing device to the network (refer to Col 6, Lines 50-55).

Although Koyanagi disclosed the invention substantially as claimed, Koyanagi is silent regarding discloses determine a best network service of a wireless network paths.

Tennison, in an analogous art discloses “determine a best network service of a wireless network paths” (refer to 0018)

Hence, providing features disclosed by Tennison, would be desirable for a user to implement in order to overcome the deficiency of data transmission in the communication environment.

Therefore, at the time of the invention, it would have been obvious to one of ordinary skill in the art to modify the system of Koyanagi by including the features presented by Tennison.

4. Referring to Claims 2 and 18, Koyanagi disclosed wherein determining a first network service level further comprises determining the first network service level based on an influenced

algorithm by allowing one of the plurality of first network characteristics to influence the determination of the first service level a first amount and allowing another of the plurality of first network characteristics to influence the determination of the first service level a second amount (refer to Col 7, Lines 50-67 and Col 8, Lines 1-40).

5. Referring to Claims 5 and 19, Koyanagi disclosed further comprising evaluating a plurality of actual best network characteristics (refer to Col 8, Lines 30-40).

6. Referring to Claims 6 and 20 Koyanagi disclosed further comprising determining an actual best network service level based on the influenced algorithm using the plurality of actual best network characteristics (refer to Col 6, Lines 45-50).

7. Referring to Claim 21 Koyanagi disclosed further comprising dynamically disconnecting the electronic computing device from a previously best network before dynamically connecting the electronic computing device to the best network (rewrite/disconnect the route, and start transmit packet to the appropriate route, refer to Col 12, Lines 45-60).

8. Referring to Claims 8 and 22, Koyanagi disclosed further comprising maintaining a profile, the profile comprising a plurality of profile characteristics (refer to Fig 12C and Fig 12B).



9. Referring to Claims 9 and 23 Koyanagi disclosed wherein the profile comprises a default user profile, the default user profile comprising a plurality of default user preference levels associated with the plurality of profile characteristics (the table showed on Fig 12B and 12C, is being defined by user and the system device maintained it and constant update it, user set weights on each element of information, refer to Col 10, Lines 50-58).

10. Referring to Claims 10 and 24, Koyanagi disclosed wherein the profile comprises a user-defined profile, the user-defined profile comprising a plurality of user-defined preference levels associated with the plurality of profile characteristics (the table showed on Fig 12B and 12C, is being defined by user and the system device maintained it and constant update it, user set weights on each element of information, refer to Col 10, Lines 50-58).

11. Referring to Claims 12 and 25, Koyanagi disclosed wherein the profile comprises an application profile, the application profile comprising a plurality of application preference levels associated with the plurality of profile characteristics (value speed as first priority, Fig 12B and 12C).

12. Referring to Claims 13 and 26, Koyanagi disclosed, wherein the profile comprises a first network profile and a second network profile, the first network profile comprising a plurality of first network characteristics associated with the first network and the second network profile comprising a plurality of second network characteristics associated with the second network (first column of the table is the first network profile, associated with the first network, refer to

Fig 12C, second column of the table is the second network profile, which comprising plurality of second network characteristics, refer to Fig 12C).

13. Referring to Claims 14 and 27 Koyanagi disclosed the process of claim 17, wherein the plurality of first network characteristics comprises at least two characteristics selected from the group consisting of a network type indicator, a cost indicator, a security indicator, a bandwidth indicator, a signal strength indicator, a time remaining indicator, and a mobility indicator (refer to service class, data transmission speed, transmission fee, Col 7, Lines 40-47, different DSP, Identification, Fig 12B, time, Fig 17b and Fig 19B).

14. Referring to Claims 28, 29 and 30, Koyanagi disclosed a network selection process for determining a best network service for an electronic computing device, the process comprising: querying a first network for a plurality of first network characteristics and querying a second network for a plurality of second network characteristics (table management unit, 27, obtain, is corresponds to “query”, Col 8, Lines 58-62, and received dynamic information, Col 6, Lines 26, and Col 6, lines 1-5); wherein the plurality of first network characteristics comprises at least two characteristics selected from the group consisting of a network type indicator, a cost indicator, a security indicator, a bandwidth indicator, and a time remaining indicator (refer to service class, data transmission speed, transmission fee, Col 7, Lines 40-47, different DSP, Identification, Fig 12B, time, Fig 17b and Fig 19B); determining a first network service level based on an influenced algorithm using the plurality of first network characteristics and determining a second network service level based on the influenced algorithm using the plurality of second network

characteristics (refer to Col 7, Lines 10-20, 50-60 and Col 8, Lines 10-25 ); determining a best network from the first and second networks based on the first and second service levels (refer to Col 8, Lines 30-40); dynamically connecting the electronic computing device to the best network (refer to Col 6, Lines 45-50); maintaining a profile that comprises a plurality of profile characteristics, including a minimum service level (routing table and information table stores the path and service class information/maintained profile, by constantly obtain information, Col 8, Lines 55-67 and Col 11, Lines 15-30, service classes rated EF-PHB, AF-PHB and best effort, and refer to Col 1, Lines 40-50, does contain a minimum service level, in Fig 8C); maintaining a default user profile that comprises a plurality of default user preference levels associated with the plurality of profile characteristics (the table showed on Fig 12B and 12C, is being defined by user and the system device maintained it and constant update it, user set weights on each element of information, refer to Col 10, Lines 50-58); maintaining a user-defined profile that comprises a plurality of user-defined preference levels associated with the plurality of profile characteristics (the table showed on Fig 12B and 12C, is being defined by user and the system device maintained it and constant update it, user set weights on each element of information, refer to Col 10, Lines 50-58); maintaining an application profile that comprises a plurality of application preference levels associated with the plurality of profile characteristics (refer to Fig 12C and Fig 12B); maintaining a first network profile that further comprises a plurality of first network characteristics associated with the first network (first column of the table is the first network profile, associated with the first network, refer to Fig 12C); maintaining a second network profile that further comprises a plurality of second network characteristics associated with the second network (second column of the table is the second network profile, which comprising plurality of

second network characteristics, refer to Fig 12C); evaluating a plurality of actual best network characteristics (Col 11, Lines 15-30); determining an actual best network service level based on the influenced algorithm using the plurality of actual best network characteristics (refer to Col 6, Lines 45-50); and dynamically disconnecting the electronic computing device from a previously best network before dynamically connecting the electronic computing device to the best network (rewrite/disconnect the route, and start transmit packet to the appropriate route, refer to Col 12, Lines 45-60).

Although Koyanagi disclosed the invention substantially as claimed, Koyanagi is silent regarding “the network characteristics consisting: a signal strength indicator and a mobility indicator, the mobility indicator comprising coverage area”

Reynolds, in analogous art, disclosing “the network characteristics consisting: a signal strength indicator (refer to 0028) and a mobility indicator, the mobility indicator comprising coverage area (refer to 0022)”

Hence, providing features disclosing by Reynolds, would be desirable for a user of Koyanagi's to implement in order to avoid drop calls and improve general quality of service during the call by determine the best available network while roaming and to perform the desirable handover to the best decided network.

Therefore, at the time of the invention, it would have been obvious to one of ordinary skill in the art to modify the system of Koyanagi by including the features such as signal strength indicator and mobility indicator as presented by Reynolds.

Although Koyanagi and Reynolds disclosed the invention substantially as claimed, Koyanagi and Reynolds are silent regarding “a network connection module configured to dynamically connect

the electronic computing device to the best network if authorization for the best network is automatic, and request and receive a user authorization from a user, provide the user authorization, and dynamically connect the electronic computing device to the best network with the user authorization if the authorization for the best network is not automatic.”

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Hence, providing features disclosing by Liang, would be desirable for a user of Koyanagi and Reynold's to implement in order to convenience the mobile user by expertise the process of handover in between the existing network to the decided network (while compliance with the network policies) while roaming.

Therefore, at the time of the invention, it would have been obvious to one of ordinary skill in the art to modify the systems of Koyanagi and Reynolds by including the features such as automatic authorize or manually authorize to connect to the network as presented by Reynolds.

15. Referring to Claims 3 and 4, Koyanagi disclosed the two amount (numerical value calculated for fee and numerical value for speed, Col 7, Lines 40-67 and Col 8, Lines 1-40), although Koyanagi disclosed the invention substantially as claimed, Koyanagi is silence regarding wherein the first amount is greater than/equal to the second amount.

However, it is obvious for ordinary skill in the art to understand that if the numerical value calculated for data transmission speed (first amount) is greater than the numerical value calculated for data transmission speed (second amount), then to select the network, the data transmission speed (first amount) is the priority, so the system by Koyanagi will place importance on data transmission speed when choosing the appropriate service class. Same theory applies, when two numerical values calculated are equal, (first amount equal to second amount) that means: the system will place importance on both data transmission speed as well as the data transmission fee.

Hence, providing given importance on data transmission speed and/or data transmission fee, disclosed by Koyanagi, would be desired for system to utilize in order for system to determined how to select the appropriate service class.

### ***Conclusion***

**Examiner's Notes:** Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner. In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the

specification which dictate(s) the structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karen C. Tang whose telephone number is (571)272-3116. The examiner can normally be reached on M-F 7 - 3.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on (571)272-3964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KT

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